

REMARKS:

CLAIM AMENDMENTS/OBJECTIONS

The Examiner has objected to claims **7** and **14** because of informalities. The Examiner stated that claims **7** and **14** should depend from claim **6**. The Applicants have amended
5 claims **7** and **14** to depend from claim **6**. Therefore, the Applicants submit that the objections are overcome. The Applicants submit that these amendments merely make explicit that which was implicit in claims **7** and **14** as originally filed. As such these amendments do not narrow the scope of any limitation or element of claim **7** or **14** within the meaning of the decision in *Festo Corp. v. Shoketsu Kogyo Kabushiki Co., Ltd.*, 234
10 *F3d 558, 566, 56 U.S.P.Q.2d 1865 (Fed. Cir. 2000) 535 U.S. 722, 152 L. Ed. 2d 944, 122 S. Ct. 1831, (2002).*

CLAIM REJECTIONS

Double Patenting

The Examiner has rejected claims **1-5, 13, 14** and **26** under the judicially created doctrine
15 of double patenting over claims **26, 27, and 32-37** of copending Application No. 09/932,433. The Examiner indicated that a timely filed terminal disclaimer would overcome the rejections. To expedite prosecution, the Assignee of the present application files herewith a terminal disclaimer in compliance with 37 C.F.R. 1.321(c) along with the appropriate fee. Therefore, the Applicants submit that the rejections are overcome.

35 USC 102

The Examiner has rejected claims **1, 6-8, 10, 12, 14, 21, 22, and 26** under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,396,975 to Wood et al. (hereinafter Wood). In rejecting the claims, the Examiner argues that Wood discloses, in figure 4b and throughout the disclosure, a microelectromechanical apparatus comprising: a base (12), a
25 flap having a portion coupled to the base so that the flap is moveable out of the plane of the base from a first angular orientation to a second angular orientation (14), wherein the base has an opening that receives the flap when the flap is in the second angular orientation (30), the opening having one or more sidewalls, wherein at least one of the sidewalls contacts a portion of the flap such that the flap assumes an orientation
30 substantially parallel to that of the sidewall when the flap is in the second angular

orientation, and a sidewall electrode disposed in one or more of the sidewalls (column 34, lines 12+).

The Applicants respectfully traverse the rejection. Claims **1** and **21**, by contrast, recite that the *flap is coupled to the base* and that *the base has an opening that receives the flap*.

5 A comparison of Wood and claims **1** and **21** reveals that Wood's sidewall is not part of an opening in the base (12). Instead, Wood's positioning structures (22) are part of a second microelectronic substrate (20) that is completely separate from the base (12) (see col. 6, lines 28-39, and figures 4a-4c, 7a-7b of Wood). As such, Wood does not teach or suggest all the features of claims **1** and **21** as they presently stand in the application.

10 Therefore, claims **1** and **21** define an invention suitable for patent protection. Furthermore, claims **2-20**, depend, either directly or indirectly, from claim **1** and recite additional features therefore. In addition, claims **22-24** depend from claim **21** and recite additional features therefor. As such and for the same reasons set forth with respect to claims **1** and **21** the Applicants submit that these dependent claims define an invention

15 suitable for patent protection.

With respect to claim **26**, the Examiner states that Wood (at column 9, lines 11+) discloses applying a fixed force to the flap to move the flap at least partially out of contact with an underlying base. To expedite prosecution, the Applicants have cancelled claim **26** while reserving the right to pursue claim **26** in a later filed divisional

20 application.

CLAIM REJECTIONS – 35 USC 103.

Wood

The Examiner has rejected claim **13** under 35 USC 103(a) as being unpatentable over

25 Wood. In rejecting claim 13, the Examiner states that Wood discloses the use of silicon for the substrate (column 6, lines 8+), but that Wood fails to disclose the use of a silicon-on-insulator wafer. The Examiner argues that one of ordinary skill in the art at the time the invention was made would have recognized the wide use of SOI wafers in a MEMS device and it would have been obvious to use a SOI wafer because it improves the

30 reliability of the switch while reducing the cost of manufacture.

The Applicants respectfully traverse the rejection on the grounds that Wood does not teach or suggest all of the limitations of claim 1, for the reasons set forth above. Furthermore, since Wood teaches that the sidewall is separate from the base to which the flap is attached, Wood teaches away from claim 1. Since claim 13 depends from claim 1,
5 no combination of Wood with skill in the art teaches all the limitations of claim 13.

Jin

The Examiner has also rejected claim 25 under 35 USC 103(a) as being unpatentable over U.S. Patent 6,256,430 to Jin et al (hereinafter Jin). The Examiner states that Jin discloses a flap moveable between two different positions having magnetic material
10 disposed on the flap and a force applied to the flap. The Examiner admits that Jin fails to disclose the magnetic material having a stepped pattern and that the applied force reduces friction. The Examiner argues that one of skill in the art would recognize that the shape of the magnetic material would have no impact on the functionality of the material and that the stepped shape would be obvious.

15 The Applicants had previously argued that the disclosure of the present application does suggest the use of a stepped magnetic material. The Examiner was not persuaded by these arguments since the application did not disclose the criticality to the invention of the stepped magnetic material. The Examiner cites the language in the specification "a stepped magnetic material *may* (emphasis added) be used with any moveable flap."

20 In response, the Applicants submit that the Examiner has cited no legal authority requiring disclosure of criticality to the invention of a claimed feature in the context of an obviousness rejection. Nor has the Examiner cited any legal authority for the requirement that the specification must indicate that the stepped magnetic material is the *only* way to increase torque. Furthermore, the Applicants have requested (under 37 CFR
25 1.104(d)(2), and the Examiner has not provided, documentary evidence supporting her contention that the shape of the magnetic material would have no impact on the functionality of the material. Such documentary evidence is required by MPEP 2144.03(C) if the rejection is to be maintained. Specifically,

30 "[i]f applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at

1697 (“[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings ” to satisfy the substantial evidence test)).”

The Examiner did not state, suggest or imply, that the cited portion of the specification provided the requested documentary support. As such, the rejection cannot be maintained.

In addition, the Applicants submit that the Examiner’s reading of the specification misinterpreted the significance of the word “may.” The sentence the cited by the Examiner, the phrase “may be used with any moveable flap” means that the nature of the *movable flap* is not critical. The very next sentence states “[t]he stepped pattern may increase the amount of torque applied to the flap when exposed to a magnetic field.” (see page 6, lines2-4). The entire section of the specification describing the stepped magnetic material provides sufficient detail to lead one of skill to discern that the use of a stepped magnetic material can increase the torque applied to the flap (see page 5 line 33 to page 6, line 25).

Finally, the Examiner herself admits that the disclosure suggests the use of a magnetic material having a stepped portion and that Jin fails to disclose such a feature. It is well established that, to establish prima facie case of obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. (see *In re Royka*, 490 F.2d, 981 and MPEP 2143.03).

Thus, for all of the reasons set forth above, the Applicants submit that claim **25** defines an invention suitable for patent protection.

ALLOWABLE SUBJECT MATTER

The Examiner has indicated that claims **2-5, 9, 11, 15-20** and **23** would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, for the reasons set forth above, the Applicants believe that the claims as they presently stand in the application are allowable over the prior art of record.

CONCLUSION

For the reasons set forth above, the Applicants submit that are allowable over the cited art and define an invention suitable for patent protection. The Applicants respectfully request entry of the amendment reconsideration of the application and that the Examiner
5 issue a Notice of Allowance in the next office action.

Respectfully submitted,



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